

Appl. No. 09/677,467  
Reply to Office Action of October 18, 2005

Docket No. RTN-130PUS

REMARKS

The above-identified patent application has been amended and Applicant respectfully requests the Examiner to reconsider and again examine the claims as amended.

Claims 1-41 are pending in the application. Claims 1-41 are rejected. Claims 2, 5, 7, 14, 16, 18, 19, 24, 26, 33, and 35 are amended herein.

As an initial matter, Applicant requests that the Examiner change the attorney docket number to be RTN-130PUS.

The Rejections under 35 U.S.C. §112, Second Paragraph

The Examiner rejects Claims 1-41 under 35 U.S.C. §112 second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The Examiner states that the wording of Claims 1, 3, 13, 22, and 32 (the independent claims) is unclear in that "...it is unclear whether the movement from an initial display position to a final display position is performed on the display or whether the initial position is displayed on a display and the final position is displayed on a display." Applicant respectfully disagrees.

The claimed invention is operable to display a label at initial display coordinates (i.e., an initial position on the display) and also to display the label at new display coordinates (i.e., a final display position). Applicant believes that the Examiner is attempting to distinguish whether, in moving the label from the initial display coordinates to the new display coordinates as claimed, the label is also displayed at one or more intermediate display coordinates, to give an impression of velocity of the label across the display.

Based on the ordinary meaning of the claim term "move," such display at one or more intermediate display coordinates is not required by the claims. In this regard, Applicant respectfully directs the Examiner's attention to the Webster's II New College Dictionary,

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hereafter called the Webster's dictionary. The Webster's dictionary defines the word "move" as "to change from one position to another." Therefore, the word "move" does not specify any position between the two positions or any requirement for a perceived velocity between the two positions. Applicant submits that the term "move" should be construed in accordance with its ordinary meaning. Therefore, Applicant submits that Claims 1, 3, 13, 22, and 32 are clear in their present form.

The Examiner also rejects Claim 5, stating the "[t]he term 'degree of severity' in claim 5 is a relative term which renders the claim indefinite."

Applicant has amended Claim 5 (and also other similar claims) herein to recite, "...said overlap score is based on a degree of overlap of labels and graphical elements." Support for this amendment can be found, for example, at page 15, line 25 to page 16, line 1:

The overlap score is generated based on the number of overlapping icons and/or the degree to which the icons overlap. The overlap score is compared against a certain threshold value to determine if, in fact, the overlap exists. The returned score data is entered into a data set at step 62.

Applicant submits that those of ordinary skill in the art will be readily able to ascertain a variety of methods to establish the claimed "degree of overlap" and associated overlap score. For example, if all icons were to be touching each other, the degree of overlap could be 100%, or it could equivalently be one. If no icons were to be touching each other, then the degree of overlap could be 0%, or zero. Other degrees of overlap could be assigned to intermediate amounts of overlap.

In view of the above, Applicant submits that the rejection of Claims 1-41 under 35 U.S.C. §112, second paragraph, should be removed.

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The Rejections under 35 U.S.C. §103(a)

Wiley et al. in View of Varon

The Examiner rejects Claims 1, 3, 9-12, 22, and 28-31 under 35 U.S.C. §103(a) as being unpatentable over Wiley et al. (U.S. Patent number 6,154,219) in view of Varon (U.S. Patent number 6,081,764). Of the above claims, Claims 1, 3, and 22 are independent claims. With regard to Claims 1, 3 and 22, the Examiner recognizes that Wiley et al. fails to teach the claimed display of the label at the initial display coordinates and the claimed moving the label on the display to new display coordinates. The Examiner relies upon Varon as teaching the claimed display of the label at the initial display coordinates and the claimed moving the label on the display. The Examiner concludes that “[i]t would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to have combined Wiley's apparatus with Varon's apparatus....” Applicant respectfully disagrees.

Independent Claim 1 recites an apparatus including “...a display processor operable to identify at least a first cluster of overlapping labels on said display ...and to move said at least one label on said display from said initial display coordinates to said new display coordinates.” Independent Claim 3 recites an apparatus including “...means for identifying at least a first cluster of overlapping labels...and means for moving said label on the display from an initial position in accordance with said initial display coordinates to a new position in accordance with said new display coordinates.” Independent Claim 22 recites a method including “...identifying at least a first cluster of overlapping labels...and moving said label on the display from said initial display coordinates to said new display coordinates.”

In essences, independent Claims 1, 3 and 22 describe apparatus and methods operable to identify clusters of overlapping labels, to display the overlapping labels at respective initial display coordinates (i.e., at initial positions on the display), to identify new display coordinates for the labels, and to move the labels to the new display coordinates (i.e., to new display positions).

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In contrast, Wiley et al. describes a map display system for which labels are displayed only at final locations, which do not collide with other objects already placed on a computer screen. Objects (including labels) are placed on the computer display one at a time, in order of importance. Objects already placed on the display are "senior" to objects not yet placed. Wiley et al. describes such an arrangement in conjunction with FIGS. 2 and 3. For example, with regard to FIG. 2, a column 2, lines 56-58, Wiley et al states "the method begins displaying and labeling the objects in the first list in ascending order by label selection priority."

Varon describes an air traffic control system having a display on which aircraft icons and associated labels move on the display. Varon attempts to solve a problem of aircraft tracking (e.g., loss of a track) on a computer display when aircraft icons collide. After the collision of aircraft icons, he attempts to resolve which aircraft icon follows which track on the computer screen thereafter. Varon does not attempt to avoid the collision of icons. For example, at column 3, lines 52-55, Varon states "[w]ith this particular arrangement, an apparatus for correlating new radar data with existing aircraft tracks and which minimizes miscorrelations, track equalization, and permanent label swapping and track loss is provided."

Applicant submits that Wiley et al. teaches away from the combination of Wiley et al. and Varon suggested by the Examiner. Wiley et al. describes a map system for which labels are statically placed on a computer display. The teachings of Wiley et al. are suitable, for example, for geographical maps for which displayed objects do not move. As described above, each object, sequentially placed, becomes senior to objects not yet placed. Applicant submits that Wiley et al. specifically excludes the possibility of any movement of objects on the computer screen. In particular, at column 8, lines 37-40, with regard to FIG. 3, Wiley et al. states "[a] decision block 234, a test determines whether the first label position collides with a senior object. In the exemplary embodiment, a senior object is not moved or removed from the display in the event of a collision." This arrangement teaches away from the combination suggested by the Examiner, wherein objects (including labels) move on the computer display.

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Applicant further submits that the combination of Wiley et al. and Varon suggested by the Examiner would not result in the claimed invention. As described above, Wiley et al. describes a map display system for which labels are statically placed based in part upon overlaps. Varon merely describes objects and associated labels that move on a computer display. Applicant submits that a combination of Wiley et al. with Varon would result in a system, which, at one time, displays objects and labels on a computer map display that do not collide by the teachings of Wiley et al., and for which labels moving thereafter by the teachings of Varon result in collisions of objects and labels on the display, which Varon does not attempt to affect.

Still further, Applicant submits that a combination of Wiley et al. and Varon entirely destroys the intended function of Wiley et al. As found in MPEP §2143.01, in order to establish a *prima facie* case of obviousness "...[i]f the proposed modification or combination of the prior art would change the principle of operation of the prior art invention being modified, then the teachings of the references are not sufficient to render the claims *prima facie* obvious." (See e.g., In re Ratti, 270 F.2d 810, 123 USPQ 349 (C.C.P.A. 1959)).

Applicant submits that, to modify the teaching of Wiley et al. in the manner suggested by the Examiner, to move displayed objects as taught by Varon, would not only change the principle of operation of, but would also *destroy the intended function* of the Wiley et al. reference. As described above, Wiley et al. intentionally teaches a display for which objects, once placed, cannot be moved thereafter. Such an arrangement is suitable, for example, for display of a static geographic map.

In view of the above, Applicant submits that independent Claims 1, 3, and 22 are patentably distinct over Wiley et al., whether taken alone or in combination with Varon.

Claims 9-12 depend from and thus include the limitations of Claim 3. Claims 28-31 depend from and thus include the limitations of Claim 22. Thus, Applicant submits that Claims 9-12 and 28-31 are patentably distinct over the cited references at least for the reasons discussed above in conjunction with Claims 3 and 22.

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Applicant submits that Claim 10 is further patentably distinct over Wiley et al., whether taken alone or in combination with Varon, since the cited references neither describe nor suggest "... means for calculating said new display coordinates according to a stochastic method," as set forth in Claim 10. Examiner uses Wiley et al. at column 8, lines 50-67 to teach the stochastic method. However, this excerpt teaches a prioritized order of label placement, which is not stochastic. Applicant can find no mention of a stochastic method of calculating new display coordinates anywhere in Wiley et al.

Applicant submits that Claim 11 is further patentably distinct over Wiley et al., whether taken alone or in combination with Varon, since the cited references neither describe nor suggest "... means for calculating said new display coordinates according to a heuristic method," as set forth in Claim 11. A heuristic method will be recognized to be a technique by which a best solution is determined from several solutions that are found by alternative methods. The Examiner again uses Wiley et al. at column 8, lines 50-67 to teach the heuristic method. However, this excerpt teaches a single prioritized order of label placement, not a selection of solutions from several alternative methods. Applicant can find no mention of a heuristic method of label placement anywhere in Wiley et al.

For substantially the same reasons discussed above in conjunction with Claim 10, Applicant submits that Claim 29 is further patentably distinct over Wiley et al., whether taken alone or in combination with Varon, since the cited references neither describe nor suggest "... said new display coordinates according to a stochastic method," as set forth in Claim 29.

For substantially the same reasons discussed above in conjunction with Claim 11, Applicant submits that Claim 30 is further patentably distinct over Wiley et al., whether taken alone or in combination with Varon, since the cited references neither describe nor suggest "... said new display coordinates according to a heuristic method," as set forth in Claim 30.

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In view of the above, Applicant submits that the rejection of Claims 1, 3, 9-12, 22, and 28-31 under 35 U.S.C. §103(a) should be removed.

Wiley et al. in View of Varon and Basani et al.

The Examiner rejects Claims 2, 4-7, 13-16, 18-21, 23-26, 32-35, and 37-41 under 35 U.S.C. §103(a) as being unpatentable over Wiley et al. in view of Varon and further in view of Basani et al. (U.S. Patent number 6,748,447). Of the above claims, only Claims 13 and 32 are independent claims. With regard to Claims 2, 4, 13, and 32, the Examiner recognizes that Wiley et al. fails to teach the claimed comparing a plurality of lists and the claimed sorting of lists according to the number of entries. The Examiner relies upon Basani et al. as teaching the claimed comparing a plurality of lists and the claimed sorting of lists according to the number of entries. The Examiner concludes that “[i]t would have been obvious to one of ordinary skill in the art at the time of the applicant’s invention to have combined Wiley and Varon with Basani, since it would have allowed a user to maintain reliable control over data....” Applicant respectfully disagrees.

As an initial matter, as the Examiner is aware, and as discussed in MPEP §2141.01(a), in order to rely upon a reference under 35 U.S.C. §103, it must be analogous prior art. Applicant submits that Basani et al. involves an entirely different and nonanalogous field of endeavor, i.e. distribution of data on a network, than the present invention. Being nonanalogous art, one faced with the problems that Wiley et al. attempts to solve, namely, collision of objects on a computer screen, would not look to Basani et al. for a solution.

Claim 2 depends from and thus includes the limitations of Claim 1. Claims 4-7 depend from and thus include the limitations of Claim 3. Claims 23-26 depend from and thus include the limitations of Claim 22. Thus, Applicant submits that Claims 2, 4-7, and 23-26 are patentably distinct over the cited references at least for the reasons discussed above in conjunction with Claims 1, 3, and 22.

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As the Examiner is aware, and as found in MPEP §2142, in order to establish a prima facie case of obviousness "...the prior art reference (or prior art references when combined) must teach or suggest all the claim limitations." With further regard to Claim 2, Applicant respectfully submits that the Examiner has not met this burden in order to establish prima facie obviousness.

Applicant submits that Claim 2 is further patentable distinct over Wiley et al., whether taken alone or on combination with Varon and Basani et al., since the cited references neither describe nor suggest the "...processor is operable to sequentially select labels from a plurality of labels on said display, and to test each of said selected labels for overlap with other labels or graphical elements in said display, and said processor is operable to accumulate an overlap score for each of said selected labels, and operable to generate a list of other labels and graphical elements that overlap each of said selected labels, and operable to compare a plurality of said lists and accumulate cluster lists of overlapping labels and graphical elements, and operable to sort a plurality of said cluster lists according to the number of entries in each...," as set forth in Claim 2.

With this particular arrangement, the present invention generates "lists of other labels and objects that overlap each of said selected labels." Therefore, a list is generated for one or more of the selected labels. The Examiner uses Wiley et al. to show this feature. However, Wiley et al. generates only a first list, which is a list of all objects on a display, and a second list, which is a list of most important objects from the first list. Wiley et al. fails to describe or suggest the claimed "lists of other labels and objects that overlap each of said selected labels."

The invention of Claim 2 is also operable to compare a plurality of said lists and accumulate cluster lists of overlapping labels and graphical elements, and operable to sort a plurality of said cluster lists according to the number of entries in each. The Examiner recognizes that neither Wiley et al. nor Varon teach the claimed features and relies upon Basani et al. to show these features.

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In contrast, Basani et al. teaches “a system and apparatus for efficient and reliable, control and distribution of data files or portions of files, applications, or other data objects in large-scale distributed network.” (abstract) At column 10, lines 32-35, Basani et al. describes “...the Scheduler builds a list of all the BESs participating in each running job and compares this list to the list of BESs to which the pending job will distribute.” Thus, Basani et al. merely compares lists of BESs (BackEnd Servers). The Examiner uses Basani et al. at column 5, line 60 to column 6, line 37 to teach the claimed sorting of lists, where Basani et al. describes a “sorted list of group leaders.” Therefore, Basani et al. merely sorts a data list. Basani et al. does not compare lists of other labels and objects that overlap each of said selected labels as claimed. Furthermore, Basani et al. does not accumulate cluster lists of overlapping labels and graphical elements, and does not sort a plurality of said cluster lists according to the number of entries in each as claimed.

For substantially the same reasons discussed above in conjunction with Claim 2, Applicant submits that dependent Claim 4, independent Claim 13, dependent Claims 23, and independent Claim 32 are further patentably distinct over Wiley et al., whether taken alone or in combination with Varon and Basani et al.

Claims 5-7 depend from and thus include the limitations of Claim 3. Claims 14-16 and 18-21 depend from and thus include the limitations of Claim 13. Claims 24-26 depend from and thus include the limitations of Claim 22. Claims 33-35 and 37-41 depend from and thus include the limitations of Claim 32. Thus, Applicant submits that Claims 5-7, 14-16, 18-21, 24-26, 33-35, and 37-41 are patentably distinct over the cited references at least for the reasons discussed above in conjunction with Claims 3, 13, 22, and 32.

Applicant submits that Claim 5 is further patentably distinct over Wiley et al., whether taken alone or in combination with Varon and Basani et al., since the cited references neither describe nor suggest "... said overlap score is based on a degree of overlap of labels and graphical elements," as set forth in Claim 5. The Examiner uses a “weighted collision array” of Wiley et al. to teach the claimed overlap score based on a degree of overlap. However, the

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"weighted collisions array" of Wiley et al. consists of the second list of Wiley et al, which is a list of display objects, and associated "collision penalty" values. A collision penalty value is described at column 7, lines 50-52 to be "a value based on the label selection priority of the point" [in the second list]. Therefore, the collision penalty value is not based upon a degree of overlap.

Applicant submits that amended Claim 7 is further patentably distinct over Wiley et al., whether taken alone or in combination with Varon and Basani et al., since the cited references neither describe nor suggest "... means for determining that the labels are overlapping other labels or graphical elements when they are transitively overlapping," as set forth in amended Claim 7. The Examiner uses Wiley et al. at column 9, lines 19-27 to teach the claimed transitively overlapping. However, Wiley et al. at column 9, lines 19-27, states:

If, at decision block 234, there is no collision, or the collision is not with a senior object, then the method 230 proceeds to step 250, which calculates a penalty. The penalty is a combination of the collision penalty (discussed above respecting FIG. 2) associated with the object or objects with which the current label position collides, and the cartographic penalty associated with the current label position. The penalty for the current label position is stored prior to proceeding to decision block 252.

In the above excerpt, Applicant can find no mention of the claimed means for determining that the labels are overlapping other labels or graphical elements when they are transitively overlapping. Applicants submit that Wiley et al. describes only a static map display.

For substantially the same reasons discussed above in conjunction with Claim 5, Applicant submits that amended Claim 14 is further patentably distinct over Wiley et al., whether taken alone or in combination with Varon and Basani et al., since the cited references neither describe nor suggest "... said overlap score is based on the degree of overlap between labels and graphical elements," as set forth in amended Claim 14.

For substantially the same reasons discussed above in conjunction with Claim 7, Applicant submits that amended Claim 16 is further patentably distinct over Wiley et al., whether taken alone or in combination with Varon and Basani et al., since the cited references neither

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describe nor suggest "...labels are determined to be overlapping other labels or graphical elements when they are transitively overlapping," as set forth in amended Claim 16.

For substantially the same reasons discussed above in conjunction with Claim 10, deficiencies of which Basani et al. fails to overcome, Applicant submits that amended Claim 18 is further patentably distinct over Wiley et al., whether taken alone or in combination with Varon and Basani et al., since the cited references neither describe nor suggest "...said new display coordinates are calculated stochastically," as set forth in amended Claim 18.

For substantially the same reasons discussed above in conjunction with Claim 11, deficiencies of which Basani et al. fails to overcome, Applicant submits that amended Claim 19 is further patentably distinct over Wiley et al., whether taken alone or in combination with Varon and Basani et al., since the cited references neither describe nor suggest "...said new display coordinates are calculated heuristically," as set forth in amended Claim 19.

Applicant submits that Claim 20 is further patentably distinct over Wiley et al., whether taken alone or in combination with Varon and Basani et al., since the cited references neither describe nor suggest "... calculating of new display coordinates is ordered according to said cluster list," as set forth in Claim 20. The term cluster list has particular meaning as recited, for example, in Claim 13, from which Claim 20 depends, and also at page 6, line 20 of the specification. A cluster list is a list of overlapping labels and graphical elements. Wiley et al. merely provides first and second lists, which are lists of display objects that may or may not overlap.

For substantially the same reasons discussed above in conjunction with Claim 5, Applicant submits that amended Claim 24 is further patentably distinct over Wiley et al., whether taken alone or in combination with Varon and Basani et al., since the cited references neither describe nor suggest "...said overlap score is based on the degree of overlap between labels and graphical elements," as set forth in amended Claim 24.

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For substantially the same reasons discussed above in conjunction with Claim 7, Applicant submits that amended Claim 26 is further patentably distinct over Wiley et al., whether taken alone or in combination with Varon and Basani et al., since the cited references neither describe nor suggest "... labels are determined to be overlapping other labels or graphical elements when they are transitively overlapping," as set forth in amended Claim 26.

For substantially the same reasons discussed above in conjunction with Claim 5, Applicant submits that amended Claim 33 is further patentably distinct over Wiley et al., whether taken alone or in combination with Varon and Basani et al., since the cited references neither describe nor suggest "... said overlap score is based on the degree of overlap between labels and graphical elements," as set forth in amended Claim 33.

For substantially the same reasons discussed above in conjunction with Claim 7, Applicant submits that amended Claim 35 is further patentably distinct over Wiley et al., whether taken alone or in combination with Varon and Basani et al., since the cited references neither describe nor suggest "... labels are determined to be overlapping other labels or graphical elements when they are transitively overlapping," as set forth in amended Claim 35.

For substantially the same reasons discussed above in conjunction with Claim 10, deficiencies of which Basani et al. fails to overcome, Applicant submits that Claim 37 is further patentably distinct over Wiley et al., whether taken alone or in combination with Varon and Basani et al., since the cited references neither describe nor suggest "... said new display coordinates are calculated according to a stochastic method," as set forth in Claim 37.

For substantially the same reasons discussed above in conjunction with Claim 11, deficiencies of which Basani et al. fails to overcome, Applicant submits that Claim 38 is further patentably distinct over Wiley et al., whether taken alone or in combination with Varon and Basani et al., since the cited references neither describe nor suggest "... said new display coordinates are calculated according to a heuristic method," as set forth in Claim 38.

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For substantially the same reasons discussed above in conjunction with Claim 20, Applicant submits that Claim 39 is further patentably distinct over Wiley et al., whether taken alone or in combination with Varon and Basani et al., since the cited references neither describe nor suggest "... calculating of new display coordinates is ordered according to said *cluster list*," as set forth in Claim 39.

In view of the above, Applicant submits that the rejection of Claims 2, 4-7, 13-16, 18-21, 23-26, 32-35, and 37-41 under 35 U.S.C. §103(a) should be removed.

Wiley et al. in View of Varon, Basani et al. and Kelley et al.

The Examiner rejects Claims 8, 17, 27, and 36 under 35 U.S.C. §103(a) as being unpatentable over Wiley et al. in view of Varon, Basani et al., and further in view of Kelley et al. (a book on C: Fourth Edition). With regard to Claims 8, 17, 27, and 36, the Examiner recognizes that Wiley et al. fails to teach the claimed sorting from largest to smallest. The Examiner relies upon Kelly et al. as teaching the claimed sorting from largest to smallest. The Examiner concludes that "[i]t would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to have combined Wiley's apparatus with Kelley's apparatus, since it would have allowed a user to quickly sort data...."

Claim 8 depends from and thus includes the limitations of Claim 3. Claim 17 depends from and thus includes the limitations of Claim 13. Claim 27 depends from and thus includes the limitations of Claim 22. Claim 36 depends from and thus includes the limitations of Claim 32. Thus, Applicant submits that Claims 8, 17, 27, and 36 are patentably distinct over the cited references at least for the reasons discussed above in conjunction with Claims 3, 13, 22, and 32.

Accordingly, Applicant submits that the rejection of Claims 8, 17, 27, and 36 under 35 U.S.C. §103(a) should be removed.

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In view of the above Amendment and Remarks, Applicant submits that Claims 1-41 and the entire case are in condition for allowance and should be sent to issue and such action is respectfully requested.

The Examiner is respectfully invited to telephone the undersigning attorney if there are any questions regarding this Amendment or this application.

The Assistant Commissioner is hereby authorized to charge payment of any additional fees associated with this communication or credit any overpayment to Deposit Account No. 500845, including but not limited to, any charges for extensions of time under 37 C.F.R. §1.136.

Respectfully submitted,

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